



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,348	03/30/2004	Larren F. Jones	51291.00081	2685
54327	7590	02/24/2006	EXAMINER	
ESCO CORPORATION 2141 NW 25TH AVENUE P.O. BOX 10123 PORTLAND, OR 97210			NEWVILLE, TONI E	
			ART UNIT	PAPER NUMBER
			3671	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/812,348	JONES ET AL.	
	Examiner	Art Unit	
	Toni Newville	3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 32-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 32-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 15-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 1/6/2006.
2. Applicant's election without traverse of Group I in the reply filed on 1/6/2006 is acknowledged.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4 and 32-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Ollinger, US 6729052.

Regarding claim 1, Ollinger discloses a lock (36) adapted to be received in a wear member (34) for holding the wear member (34) to a structure of an excavator (32) subjected to wear, the lock (36) comprising (Fig. 10):

- A body (127, 123) adapted to be received in an opening (110) of the wear member, the body (127, 123) including a front wall (125) for opposing a bearing wall of the structure, a rear wall (135) for opposing a bearing wall of the wear member (column 9 lines 32-37), and a hole (151) extending through the body (127, 123) and opening in the front (135) and rear (125) walls, the hole (151) having threads (Fig. 10);
- A threaded member (133) for expanding the lock to tighten the mounting of the wear member on the structure, the threaded member (133) being received in the hole (151);
- A resilient member (131) impeding loosening of the threaded member; and
- A retainer member (141, 143) holding the body in the opening (110) of the wear member.

Regarding claim 2, the resilient member (131) is received in the hole (Fig. 14) and advanced forward into contact with the structure (32) via sidewalls (149) and retainer member (141, 143) by the threaded member (133) and compressed between the threaded member (133) and the structure (32) so that the lock applies a continuous biasing force to the wear member (column 9 lines 50-57).

Regarding claim 3, the resilient member (131) further includes an elastomeric body (31) and a hard shell (129) fixed to the elastomeric body when assembled to contact the structure (32) and protect the elastomeric body (Fig. 12).

Regarding claim 4, the resilient member (131) is substantially wider than the threaded member (133) (Fig. 10).

Regarding claim 32, Ollinger discloses a lock (36) for holding a wear member (34) to a structure (32) of an excavator subjected to wear, the lock (36) comprising:

- A body (127, 123) adapted to be received in an opening (151) of the wear member, the body (127, 123) including a first wall (125) for opposing a bearing wall of the structure (32), a second wall (135) for opposing a bearing wall of the wear member (125), and a threaded hole (151) extending through the body (127, 123) and opening in the first and second walls (125, 135).
- A threaded member (133) movably received in the threaded hole (151) in the body (127, 123) to tighten the mounting of the wear member (34) on the structure (32); and
- A resilient member (131) impeding loosening of the threaded member (133).

Art Unit: 3671

Regarding claim 33, the threaded member (133) presses the resilient member (131) when moved to tighten the mounting of the wear member on the structure (column 9 lines 37-40).

Regarding claim 34, the resilient member (131) is pressed between the threaded member (133) and one of the bearing walls (Fig. 14).

Regarding claim 35, the lock further includes a shell (129) overlying the resilient member (131) to engage one of the bearing walls.

Regarding claim 36, the resilient member is an elastomer (column 9 lines 7-9).

Regarding claim 37, the lock further includes a retainer (141, 143) releasably holding the body (127, 123) in the opening (110) of the wear member.

5. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson, US 5983534.

Regarding claim 1, Robinson discloses a lock (64) adapted to be received in a wear member (58) for holding the wear member (58) to a structure of an excavator (24) subjected to wear, the lock (64) comprising:

- A body (64) adapted to be received in an opening (12, 14) of the wear member, the body (64) including a front wall for opposing a bearing wall of the structure, a rear wall for opposing a bearing wall of the wear member (Fig. 3), and a hole (90) extending through the body (64) and opening in the front and rear walls, the hole (90) having threads (Fig. 6);
- A threaded member (100) for expanding the lock to tighten the mounting of the wear member on the structure, the threaded member (100) being received in the hole (90);
- A resilient member (96, 102) impeding loosening of the threaded member; and
- A retainer member (66) holding the body in the opening (12, 14) of the wear member.

Regarding claim 2, Robinson discloses the resilient member (96, 102) being received in the hole (90) and advanced forward into contact with the structure by the threaded member (100) and compressed between the threaded member (100) and the structure so that the lock (64) applies a continuous biasing force to the wear member (column 5 lines 40-53).

Regarding claim 5, Robinson discloses that the body (64) includes an opening (86) with threads (Fig. 6), and wherein the retainer (66) includes a threaded shank (80) received in the opening (86) and adjustable to project from one

surface of the body to hold the lock in the wear member and to retract within the one surface of the body to permit removal of the lock (column 5 lines 17-26).

Regarding claim 6, Robinson discloses that the hole (90) and the opening (86) are substantially parallel (Fig. 7).

6. Claims 10-13 and 38-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Quarfordt, US 5802752.

Regarding claims 10 and 38, Quarfordt discloses a lock (15) adapted to be received in a wear member (1) for holding the wear member (1) to a structure of an excavator subject to wear, the lock (15) comprising:

- A body having an elongate, arcuate configuration (Fig. 3);
- A movable take-up element (16) projecting from the body for tightening the connection of the wear member on the structure, and
- A latch (22) projecting from the body for retaining the lock in the wear member (column 3 lines 4-6).

Regarding claim 11, the body (15) includes a first end (near 22) and a second end (near 16), wherein the body is wider at the second end than at the first end.

Regarding claim 12, the body (15) gradually tapers from the second end to the first end (Fig. 3).

Regarding claims 13 and 39, the take-up element (16) and latch (22) are each a resilient member due to rubber filling (20, 21).

Regarding claim 40, the resilient member (20, 21) is an elastomer.

Regarding claim 41, the latch (22) acts as a detent for holding the lock in the wear member (1) during use.

Regarding claim 42, the take-up element (16) and detent (22) each include a resilient member due to rubber filling (20, 21).

Regarding claim 43, the body (15) has a narrow, elongate configuration (Fig. 3).

Regarding claim 44, the body includes a pair of opposite ends (near 16 and 22) and gradually narrows from one end to the other (Fig. 3).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3671

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones, US 5653048, cited by applicant, in view of Robinson et al., US 5983534.

Regarding claim 1, Jones discloses a lock (26) adapted to be received in a wear member (10) for holding the wear member (10) to a structure of an excavator (14) subjected to wear, the lock (26) comprising (Fig. 10):

- A body (108) adapted to be received in an opening (76) of the wear member, the body (108) including a front wall (109) for opposing a bearing wall of the structure, a rear wall (110) for opposing a bearing wall of the wear member, and a hole (116) extending through the body (108) and opening in the front (109) and rear (110) walls, the hole (116) having threads (column 5 line 67 – column 6 line 1);
- A threaded member (118) for expanding the lock to tighten the mounting of the wear member on the structure, the threaded member (118) being received in the hole (116); and
- A retainer (98) holding the body in the opening (76) of the wear member.

Jones fails to disclose a resilient member impeding loosening of the threaded member (118).

Like Jones, Robinson discloses a wear member assembly, including a lock (64) received in an opening (12, 14) in a wear member (58) for securing the wear member to a structure of an excavator (24), the lock (64) including a threaded hole (90) and a threaded member (100) being received in the hole. Unlike Jones, Robinson further discloses resilient members (102, 96) impeding loosening of the threaded members (Fig. 6).

Given the suggestion in Robinson, it would have been obvious to one of ordinary skill in the art to include a resilient member (Robinson; 102, 96) in the lock (Robinson; 64) of Jones to improve biasing of the lock against the wear member (Jones; 10) and excavator structure (Jones; 14) of Jones, thereby preventing loosening of the wear member and excavator structure and minimizing the need for replacing the wear assembly.

9. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones, US 5653048, cited by applicant, in view of Robinson et al., US 5983534, as applied to claim 1 above, and further in view of Breuer et al., US 4626034.

Regarding claim 7, Jones and Robinson disclose a lock as described above regarding claim 1, and Jones further discloses a passage (130) and the retainer (98) includes a latch (98) that moves in the passage (column 5 lines 52-54). Jones fails to disclose the passage being arcuate.

Like the combination, Breuer discloses a wear member assembly for an excavating structure, including a retainer (16) inserted in a passage (between 15 and

17, Fig. 1). Unlike the combination, Breuer further discloses the retainer (16) and passage being arcuate (Fig. 1).

Given the suggestion in Breuer, it would have been obvious to one of ordinary skill in the art to make the passage (Jones; 130) and retainer (Jones; 98) of Jones arcuate as taught in Breuer to increase the surface area between the passage and the retainer, thereby increasing friction between the two parts and preventing undesired movement or loosening between the two components.

Regarding claim 8, Jones discloses the latch (98) including an elastomeric member (128) and a hard plug (126) fixed to the elastomeric member, wherein the plug (126) is movable to project beyond one surface of the body and to retract within the one surface of the body (Fig. 16).

Regarding claim 9, the passage (130) includes a shoulder (131) and the latch (98) has a ledge (133) that engages a side of the shoulder (131) in way that that releasably prevents retraction of the latch (98) unless a tool is used to retrieve latch (98).

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ollinger, US 6729052, in view of Immel et al., US 5410826, cited by applicant.

Ollinger discloses a lock (36) adapted to be received in a wear member (34) for holding the wear member (34) to a structure (32) of an excavator subjected to wear, the lock (36) comprising (Fig. 10):

- A body (127) including a front wall (135) for opposing a bearing wall of the structure, a rear wall (125) for opposing a bearing wall of the wear member (column 9 lines 32-37), and a threaded hole (151) extending through the body (127) and opening in the front (135) and rear (125) walls; and
- A threaded member (133) received in the hole (151) and selectively projecting beyond the front wall (135) of the body (127) to expand the lock and thereby tighten the mounting of the wear member on the structure (32) (column 9 lines 50-57).

Ollinger fails to disclose the threaded member (133) having a thread deformation forward of the front wall to prevent loosening of the threaded member (133).

Like Ollinger, Immel discloses a lock (10) for holding a wear member (63) to an excavator structure (165) into which a threaded member (31b) is received. Unlike Ollinger, Immel discloses the threaded member (31b) having a thread deformation (nut 33b) forward of a front wall of the lock to prevent loosening of the threaded member (column 9 lines 42-46).

Given the suggestion in Ollinger, it would have been obvious to one of ordinary skill in the art to include a thread deformer on the lock (Ollinger; 36) of Ollinger because it is commonly known in the excavator connector art to include thread deformers on

Art Unit: 3671

threaded structures to prevent loosening of threaded structures which, due to the nature of excavation equipment, are subjected to high levels of abrasion and wear which may cause thread loosening.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toni Newville whose telephone number is (571) 272 - 1548. The examiner can normally be reached on Monday - Friday 8 am - 5 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571) 272-6998. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 3671

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Toni Newville
February 10, 2006


DAVID BAGNELL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600


THOMAS B. WILL
Supervisory Patent Examiner
Group 3600